

Claims

1. A truncated EGFR ectodomain, the truncated EGFR ectodomain
lacking a substantial portion of the CR2 domain such that the truncated
5 EGFR ectodomain has an increased binding affinity for at least one EGFR
ligand when compared to the full length EGFR ectodomain.
2. A truncated EGFR ectodomain as claimed in claim 1 wherein the
truncated EGFR ectodomain has an increased binding affinity for EGF and/or
10 TGF- α .
3. A truncated EGFR ectodomain as claimed in claim 1 or claim 2
wherein the truncated EGFR ectodomain lacks at least the third to seventh
modules of the CR2 domain.
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4. A truncated EGFR ectodomain as claimed in any one of claims 1 to 3
wherein the truncated EGFR ectodomain lacks at least the second to seventh
modules of the CR2 domain.
- 20 5. A truncated EGFR ectodomain as claimed in any one of claims 1 to 4
wherein the truncated EGFR ectodomain further lacks a portion of the first
module of the CR2 domain.
6. A truncated EGFR ectodomain as claimed in any one of claims 1 to 5
25 wherein the truncated EGFR ectodomain lacks residues 514-621.
7. A truncated EGFR ectodomain as claimed in any one of claims 1 to 6
wherein the truncated EGFR ectodomain lacks residues 502-621.
- 30 8. A truncated EGFR ectodomain as claimed in any one of claims 1 to 7
wherein the truncated EGFR ectodomain comprises the L1, CR1 and L2
subdomains.
9. A truncated EGFR ectodomain as claimed in any one of claims 1 to 8
35 wherein the truncated EGFR ectodomain comprises residues 1-492 of the
EGFR ectodomain.

10. A truncated EGFR ectodomain as claimed in any one of claims 1 to 9 wherein the truncated EGFR ectodomain comprises residues 1-501 or residues 1-513 of the EGFR ectodomain.
- 5 11. A truncated EGFR ectodomain as claimed in any one of claims 1 to 10 wherein the truncated EGFR ectodomain has an affinity for EGF such that the K_d is less than 30 nM.
- 10 12. A truncated EGFR ectodomain as claimed in any one of claims 1 to 10 wherein the truncated EGFR ectodomain has an affinity for TGF- α such that the K_d is less than 45 nM.
- 15 13. A polynucleotide encoding a truncated EGFR ectodomain as claimed in any one of claims 1 to 12.
14. An expression vector comprising a polynucleotide as claimed in claim 13.
- 20 15. A host cell comprising an expression vector as claimed in claim 14.
16. A chimeric or fusion construct comprising a truncated EGFR ectodomain as claimed in any one of claims 1 to 12.
- 25 17. A chimeric or fusion construct as claimed in claim 16 wherein the truncated EGFR ectodomain is conjugated to an immunoglobulin constant domain.
- 30 18. A method for producing a truncated EGFR ectodomain, the method comprising culturing a host cell as claimed in claim 15 under conditions which allow production of the truncated EGFR ectodomain and isolating the truncated EGFR ectodomain.
- 35 19. A pharmaceutical composition comprising a truncated EGFR ectodomain as claimed in any one of claims 1 to 12 or a chimeric or fusion

construct as claimed in claim 16 or claim 17 and a pharmaceutically acceptable carrier or diluent.

20. A method of screening a putative compound for the ability to modulate
5 the activity of the EGF receptor, the method comprising exposing the putative compound to a truncated EGFR ectodomain as claimed in any one of claims 1 to 12 and monitoring the activity of the truncated EGFR ectodomain.

21. A method of treating or preventing a disease associated with signalling
10 by a molecule of the EGF receptor family in a subject, the method comprising administering to the subject a truncated EGFR ectodomain as claimed in any one of claims 1 to 12.

22. A method as claimed in claim 21 wherein the disease associated with
15 signalling by a molecule of the EGF receptor family is selected from psoriasis and tumour states comprising but not restricted to cancer of the breast, brain, ovary, cervix, pancreas, lung, head and neck, and melanoma, rhabdomyosarcoma, mesothelioma and glioblastoma.